OT 0 3 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

in re Application of:

Lihua Li, et al.

Serial No.: 10/801,190

Confirmation No.: 1633

Filed:

March 15, 2004

For:

Adhesion Improvement for

Low K Dielectrics

Group Art Unit: 2891

Examiner:

Granvill D. Lee

MAIL STOP AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 CERTIFICATE OF MAILING 37 CFR 1.8

I hereby certify that this correspondence is being deposited on <u>September 29, 2005</u> with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

September 29, 2005

Date

Brian K. Hrna

Dear Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

The Applicants, and the Attorney who signs below on the basis of the information supplied by the inventor and the information in his file, submit herewith patents, publications, or other information of which they are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

While the information submitted in this Supplemental Information Disclosure Statement may be material pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication, or other information referred to therein is prior art for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97, this Supplemental Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possibly material information as defined under 37 CFR § 1.56(a) exists.

10/05/2005 HLE333 00000031 200782 10801190

The patents and/or publications submitted herewith are set forth on the attached Form PTO-1449.

The Commissioner is hereby authorized to charge the sum of \$180.00 due under 37 CFR § 1.17(p) pursuant to § 1.97, and any other fee necessary to make this submission timely, to the Deposit Account No. 20-0782/APPM/008670/BKH.

Respectfully submitted,

Brian K. Hrna

Registration No. 41,852

PATTERSON & SHERIDAN, L.L.P. 3040 Post Oak Blvd. Suite 1500

Houston, TX 77056

Telephone: (713) 623-4844 Facsimile: (713) 623-4846 Attorney for Applicant(s)

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Approved for use through 07/31/2006, OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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(Use as many sheets as necessary)

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3	persons are required to respond to a collection	n of information unless it displays a valid OMB control numbe
	Application Number	10/801,190
	Filing Date	March 15, 2004
	First Named Inventor	Lihua Li, et al.
	Group Art Unit	2891
	Examiner Name	Granvill D. Lee
	Attorney Docket Number	APPM/008670/DSM/LOW K/JW
	Submission Date	September 29, 2005

			U.S. PATENT	DOCUMENTS	
Examiner Initials*	Cite Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	
		Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
	A1	US-3,510,369	5/5/1970	Emick, et al.	
	A2	US-4,262,631	4/21/1981	Kubacki	
	А3	US-4,532,150	7/30/1985	Endo et al.	
	A4	US-4,634,601	1/6/1987	Hamakawa, et al.	
	A5	US-4,649,071	3/10/1987	Tajima, et al.	
-	A6	US-4,759,947	7/26/1988	Hishihara, et al.	
	A7	US-4,872,947	10/10/1989	Wang, et al.	
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	A12	US-5,000,113	3/19/1991	Wang, et al.	
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	A14	US-5,011,706	4/30/1991	Tarhay, et al.	
	A15	US-5,086,014	2/4/1992	Miyata, et al.	
	A16	US-5,087,959	2/11/1992	Omori, et al.	
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	A18	US-5,238,866	8/24/1993	Bolz, et al.	
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	A20	US-5,271,972	12/21/1993	Kwok, et al.	
	A21	US-5,298,587	3/29/1994	Hu, et al.	
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	A24	US-5,362,526	11/8/1994	Wang, et al.	
	A25	US-5,465,680	11/14/1995	Loboda	
	A26	US-5,468,978	11/21/1995	Dowben	
	A27	US-5,480,300	1/2/1996	Okoshi, et al.	
	A28	US-5,494,712	2/27/1996	Hu, et al.	

Date Considered Examiner

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

> (Use as many sheets as necessary) 10

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	Application Number	10/801,190	
	Filing Date	March 15, 2004	
	First Named Inventor	Lihua Li, et al.	
	Group Art Unit	2891	
	Examiner Name	Granvill D. Lee	
	Attorney Docket Number	APPM/008670/DSM/LOW K/JW	
	Submission Date	September 29, 2005	

			U.S. PATENT	DOCUMENTS	
Examiner Initials*	Cite Document Number		Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
		Number-Kind Code ^{2 (if known)}	IVIIVI-DD-1111	Applicant of Cited Document	Figures Appear
	A29	US-5,554,570	9/10/1996	Maeda, et al.	
	A30	US-5,565,084	10/15/1996	Lee, et al.	
	A31	US-5,591,566	1/7/1997	Ogawa	
-	A32	US-5,607,773	3/4/1997	Ahlburn, et al.	
	A33	US-5,638,251	6/10/1997	Goel, et al.	
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·	A39	US-5,730,792	3/24/1998	Camilletti, et al.	
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	A45	US-5,817,572	10/6/1998	Chiang, et al.	
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	A51	US-5,926,740	7/20/1999	Forbes, et al.	
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	A54	US-6,045,877	4/4/2000	Gleason, et al.	

Date Considered Examiner

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(Use as many sheets as necessary)
Sheet 3 of 10

U	ersons are required to respond to a collecti	on of information unless it displays a valid OMB contro	Loumbe
	Application Number	10/801,190	
	Filing Date	March 15, 2004	
	First Named Inventor	Lihua Li, et al.	
	Group Art Unit	2891	
	Examiner Name	Granvill D. Lee	
	Attorney Docket Number	APPM/008670/DSM/LOW K/JW	
	Submission Date	September 29, 2005	

			U.S. PAIENI	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
	<u> </u>	Number-Kind Code ^{2 (if known)}	WINNE COST 1 1 1	Applicant of Oiled Document	Figures Appear
,	A55	US-6,051,321	4/18/2000	Lee, et al.	
	A56	US-6,054,379	4/25/2000	Yau, et al.	
	A57	US-6,057,251	5/2/2000	Goo, et al.	
	A58	US-6,060,132	5/9/2000	Lee	
	A59	US-6,068,884	5/30/2000	Rose, et al.	
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	A64	US-6,124,641	9/26/2000	Matsuura	
	A65	US-6,140,226	10/31/2000	Grill, et al.	
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	A67	US-6,153,537	11/28/2000	Bacchetta, et al.	
	A68	US-6,159,871	12/12/2000	Loboda, et al.	
	A69	US-6,242,339	6/5/2001	Aoi	
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	A71	US-6,287,990	9/11/2001	Cheung et al.	
	A72	US-6,291,334	9/18/2001	Somekh	
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	A74	US-6,312,793	11/6/2001	Grill, et al.	
1 6	A75	US-6,316,167	11/13/2001	Angelopoulos, et al.	
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	A77	US-6,340,435	1/22/2002	Bjorkman, et al.	
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	A79	US-6,344,693	2/5/2002	Kawahara, et al.	
	A80	US-6,348,725	2/19/2002	Cheung, et al.	
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	A82	US-6,352,945	3/5/2002	Matsuki, et al.	

Examiner

Date Considered

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SUPPLEMENTAL INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

Application Number March 15, 2004 Filing Date First Named Inventor Lihua Li, et al. 2891 Group Art Unit

10/801,190

Granvill D. Lee **Examiner Name**

APPM/008670/DSM/LOW K/JW Attorney Docket Number

(Use as many sheets as necessary) Sheet 10 September 29, 2005 Submission Date

			J.J. FATERT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A83	US-6,362,091	3/26/2002	Andideh, et al.	
	A84	US-6,383,955	5/7/2002	Matsuki, et al.	
	A85	US-6,409,238	6/25/2002	Mikenis, et al.	
	A86	US-6,410,462	6/25/2002	Yang, et al.	
	A87	US-6,410,463	6/25/2002	Matsuki, et al.	
	A88	US-6,413,583	7/2/2002	Moghadam, et al.	
	A89	US-6,432,846	8/13/2002	Matsuki	
	A90	US-6,436,824	8/20/2002	Chooi, et al.	
	A91	US-6,437,443	8/20/2002	Grill, et al.	
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	A95	US-6,465,366	10/15/2002	Nemani, et al.	
	A96	US-6,479,110	11/12/2002	Grill, et al.	
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	A98	US-6,486,061	11/26/2002	Xia, et al.	
	A99	US-6,486,082	11/26/2002	Cho, et al.	
	A100	US-6,489,238	12/3/2002	TSUI	
	A101	US-6,500,773	12/31/2002	Gaillard, et al.	
	A102	US-6,511,903	1/28/2003	Yau, et al.	
	A103	US-6,511,909	1/28/2003	Yau, et al.	
	A104	US-6,521,300	2/18/2003	Hsieh, et al.	
	A105	US-6,521,302	2/18/2003	CAMPANA-SCHMITT, ET AL.	
	A106	US-6,528,423	3/4/2003	Catabay, et al.	
	A107	US-6,531,714	3/11/2003	Bacchetta, et al.	
	A108	US-6,532,150	3/11/2003	Sivertsen, et al.	
	A109	US-6,537,733	3/25/2003	Campana, et al.	
	A110	US-6,537,929	3/25/2003	Cheung, et al.	
	A111	US-6,541,282	4/1/2003	Cheung, et al.	

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Examiner Initials*	No.1	Number-Kind Code ² (f known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A112	US-6,541,369	4/1/2003	Huang, et al.	
-	A113	US-6,541,398	4/1/2003	Grill, et al.	
	A113	US-6,548,899	4/15/2003	Ross	
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		US-6,559,520	5/13/2003	Cheung, et al.	
-	A117	US-6,562,690			<u> </u>
	A118	US-6,570,256	5/27/2003	Conti, et al.	
	A119	US-6,573,196	6/3/2003	Gaillard, et al.	
	A120	US-6,582,777	6/24/2003	Ross, et al.	
	A121	US-6,583,048	6/24/2003	Vincent, et al.	
	A122	US-6,583,071	6/24/2003	Weidman, et al.	
	A123	US-6,592,890	7/15/2003	Green	
	A124	US-6,593,247	7/15/2003	Huang, et al.	
•	A125	US-6,593,633	7/15/2003	Jan, et al.	
	A126	US-6,593,653	7/15/2003	Sundararajan, et al.	
	A127	US-6,596,655	7/22/2003	Cheung, et al.	
	A128	US-6,605,549	8/12/2003	Leu, et al.	
	A129	US-6,624,053	9/23/2003	Passemard	
	A130	US-6,627,532	9/30/2003	Gaillard, et al.	
	A131	US-6,642,157	11/4/2003	Shioya, et al.	
	A132	US-6,645,883	11/11/2003	Yamamoto, et al.	
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	A134	US-6,660,391	12/9/2003	Rose, et al.	
	A135	US-6,660,656	12/9/2003	Cheung, et al.	
	A136	US-6,660,663	12/9/2003	Cheung, et al.	
	A137	US-6,673,725	1/6/2004	Shioya, et al.	
	A138	US-6,703,302	3/9/2004	Miyajima, et al.	

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September 29, 2005

10/801,190 Application Number Substitute for form 1449A/PTO March 15, 2004 Filing Date SUPPLEMENTAL First Named Inventor Lihua Li, et al. INFORMATION DISCLOSURE Group Art Unit 2891 STATEMENT BY APPLICANT **Examiner Name** Granvill D. Lee APPM/008670/DSM/LOW K/JW Attorney Docket Number (Use as many sheets as necessary)

Submission Date

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			U.S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
		Number-Kind Code ^{2 (# known)}	101101-00-11111	Applicant of Cited Document	Figures Appear
	A137	US-6,673,725	1/6/2004	Shioya, et al.	
	A138	US-6,703,302	3/9/2004	Miyajima, et al.	
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-	A143	US-6,740,539	5/25/2004	Conti, et al.	
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· · · · · ·	A163	US-2002/0098714	7/25/2002	Grill, et al.	
	A164	US-2002/0111042	8/15/2002	Yau, et al.	

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10/801,190 **Application Number** Substitute for form 1449A/PTO March 15, 2004 Filing Date SUPPLEMENTAL First Named Inventor Lihua Li, et al. INFORMATION DISCLOSURE Group Art Unit 2891 STATEMENT BY APPLICANT **Examiner Name** Granvill D. Lee APPM/008670/DSM/LOW K/JW Attorney Docket Number (Use as many sheets as necessary)

Submission Date

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Examiner	Cite		Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No. ¹	Number-Kind Code ² (f known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
	A165	US-2002/0160626	10/31/2002	Matsuki, et al.	
	A166	US-2002/0172766	11/21/2003	Laxman, et al.	
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,	A186	US-2003/0232495	12/18/2003	Moghadam,et al.	
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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Application Number	10.001100
Filing Date	March 15, 2004
First Named Inventor	Lihua Li, et al.
Group Art Unit	2891
Examiner Name	Granvill D. Lee
Attorney Docket Number	APPM/008670/DSM/LOW K/JW
Submission Date	September 29, 2005

	U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.1	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ^{2 (# known)}			
	A193	US-2004/0166665	8/26/2004	Gaillard, et al.	
	A194	US-2004/0175957	9/9/2004	Lukas, et al.	
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Exa mine r Initia	Cite No.'	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures	T [©]
ls*	B1	DE 196 54 737 (Eng. Transl.)	12/30/1996	Itoh, et al.	Appear	x
	B2	DE 199 04 311 (Eng. Abstract)	8/12/1999	Shu, et al.		X
	B3	EP 0 613 178	2/22/1994	Michael		
	B4	EP 0 725 440	8/7/1996	Loboda, et al.		
	B5	EP 1 029 728	8/23/2000	Antonelli		
	B6	EP 1 107 303	6/13/2001	Shao, et al.		
	B7	EP 1 176 226	1/30/2002	Nemani, et al.		
	B8	EP 1 354 980	10/22/2003	Vrtis, et al.		
	B9	JP 09-008031 (Eng. Abstract)	1/10/1997	Toshiaki		X
	B10	JP 09-320075 (Eng. Abstract)	12/09/1997	Seiji, et al.		X
	B11	JP 09-321175 (Eng. Abstract)	12/12/1997	Seiji, et al.		X
	B12	JP 9-237785	7/3/1997	Itoh, et al.		
	B13	WO 00/19498	4/6/2000	Huang		
	B14	WO 00/20900	04/13/2000	Bencher, et al.		
	B15	WO 01/61737	8/23/2001	Ross, et al.		
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	B17	WO 99/33102	7/1/1999	Somekh		
	R18	WO 99/41423	8/19/1999	Choung, et al.		

Date Considered Examiner

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		PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T²
	C1	Dijkstra et al., "Optimization of Anti-Reflection Layers for Deep UV Lithography", Proceedings of SPIE Optical/Laser Microlithography, Bellingham, SPIE, vol. 1927, 1993, pages 275-286.	
	C2	FUKUDA, ET AL. "Highly Reliable SiOF Film Formation by ECR-CVD Using SiF2H2", Symposium on VLSI Technology Digest of Technical Papers IEEE (1996) pp. 114-115.	
	С3	Ogawa et al., "Novel ARC Optimization Methodology for KrF Excimer Laser Lithography at Low K1 Factor", <i>Proceedings of the SPIE. Optical/Laser Microlithography V,</i> vol. 1674, 1992, pages 362-375.	
	C4	Omar, M.A., "Elementary Solid State Physics: Principles and Applications," Lowell Technological Institute, Addison-Wesley Publishing Company, © 1975, Pages: 124, 125.	
	C5	PCT International Search Report dated February 11, 2000 for PCT/US99/22425.	
	C6	PCT International Search Report for PCT/US2004/006849, dated January 19, 2005 (AMAT/7838.PC)	
	C7	PCT International Search Report for US/02/36229, dated September 3, 2003 (AMAT/6392.PC)	
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Substitute for form 1449A/PTO

Application Number

10/801,190

Substitute for form 1449A/PTO	Application Number	10/801,190
	Filing Date	March 15, 2004
SUPPLEMENTAL	First Named Inventor	Lihua Li, et al.
INFORMATION DISCLOSURE	Group / it Crim	2891
STATEMENT BY APPLICANT	Examiner Name	Granvill D. Lee
(Use as many sheets as necessary)	Attorney Docket Number	APPM/008670/DSM/LOW K/JW
Sheet 10 of 10	Submission Date	September 29, 2005

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	C13	U.S. Patent Application No. 09/270,039, filed on March 16, 1999, Huang. (AMAT/2966.X3)		
	C14	U.S. Patent Application Serial No. 11/142,124, filed on June 1, 2005 (APPM/009516)		
	C15	Written Opinion, from PCT/US99/22424, dated April 5, 2001. (AMAT/2966.03 PC)		
	C16	Wu, et al "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology", 2002 IEEE, IEDM Pages 595-598.		
				

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